

# TC5V 閥門控制器操作手冊

## TC5V Valve Gate Controller User Manual

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### 操作手冊 USER'S MANUAL



Ver.:TC5V-1.0.2

長新科技股份有限公司 ARICO Technology Co., Ltd.

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For avoid wrong operation to make human injured or machine damage,  
Please read this instruction carefully before use the instrument.

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# Chapter 1 TC5V Valve Gate Controller Module

## 1-1 Feature

- Multiple Touch-off signal options(AC220/110/DC24/Switch type)
- Multiple output voltage options (AC220/110/DC24/Relay/MOS Relay)
- Time display is adjustable to the first digit after the decimal point
- Stopwatch can be either accumulative or countdown.
- Three optional control modes.
- Optional pressure retaining mode.
- MOS Relay extension of working life.
- Mechanical Relay(up to 600mA) is optional.

## 1-2 Specification Software function (setting level)

- A, B, AB three control switches
- Pressure retaining mode switch (delay, work)
- Pressure retaining delay time setting
- Pressure retaining time setting
- Decimal point switch
- Display mode

## 1-3 Module specification

- Panel measurement: 50\*176mm
- Display: 7-Section tube 0.4\*4\*2
- Power switch: Manual dial type
- Input power: AC220 (50/60Hz)
- Trigger voltage: (Must jump JP), AC110 (50/60Hz), AC220 (50/60Hz), DC24, Switch (DC24)
- Output power: (must jump JP), AC110(RELAY/electronic switch 4VA), AC220 (RELAY + 2A/electronic switch 600mA),DC24 (RELAY/electronic switch 4W), RELAY - 2A/electronic switch - 600mA (either one)
- Keys: 5 keys (select/confirm, manual output, plus, minus, time setting)
- Function display lamps: A/B mode lamp, OPEN lamp, SIGNAL lamp, pressure retaining lamp, manual output lamp

## 1-4 Description of operation panel

### 1-4-1 Faceplate description

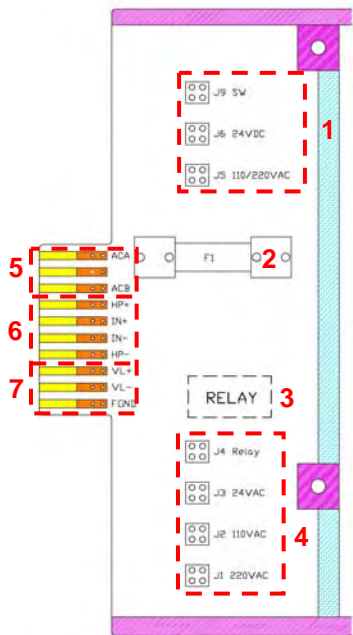



1. Delay time: when a transmission is signal is received, it displays delay time.
2. Activation time: when run-in point is turned on, it displays activation time.
3. Activation indication: when run-in point is turned on, the indicator lamp turns on.
4. Signal indication: when signal is received, the indicator lamp turns on.
5. Pressure retaining indication: when pressure retaining is activated, lamp will turn on; when pressure retaining is operating, it flashes on and off.
6. Mode indication: In A mode, A lights up; in B mode, B lights up; in AB mode, A&B light up.
7. Up key: Sets plus or function.
8. Time set: Enters delay and activation time setting mode.
9. Down key: Sets minus or function.
10. Function option: Enters the setting level for optional functions
11. Manual indication: Indication of start of manual output
12. Manual key: Press once to turn on, "manual output"; Press again to turn off, "manual output".
13. Panel handle
14. Power switch
15. Fix panel

#### Fast key function:

"T" press pressure retaining switch for 3 seconds, the pressure retaining switch will save the previous setting time.

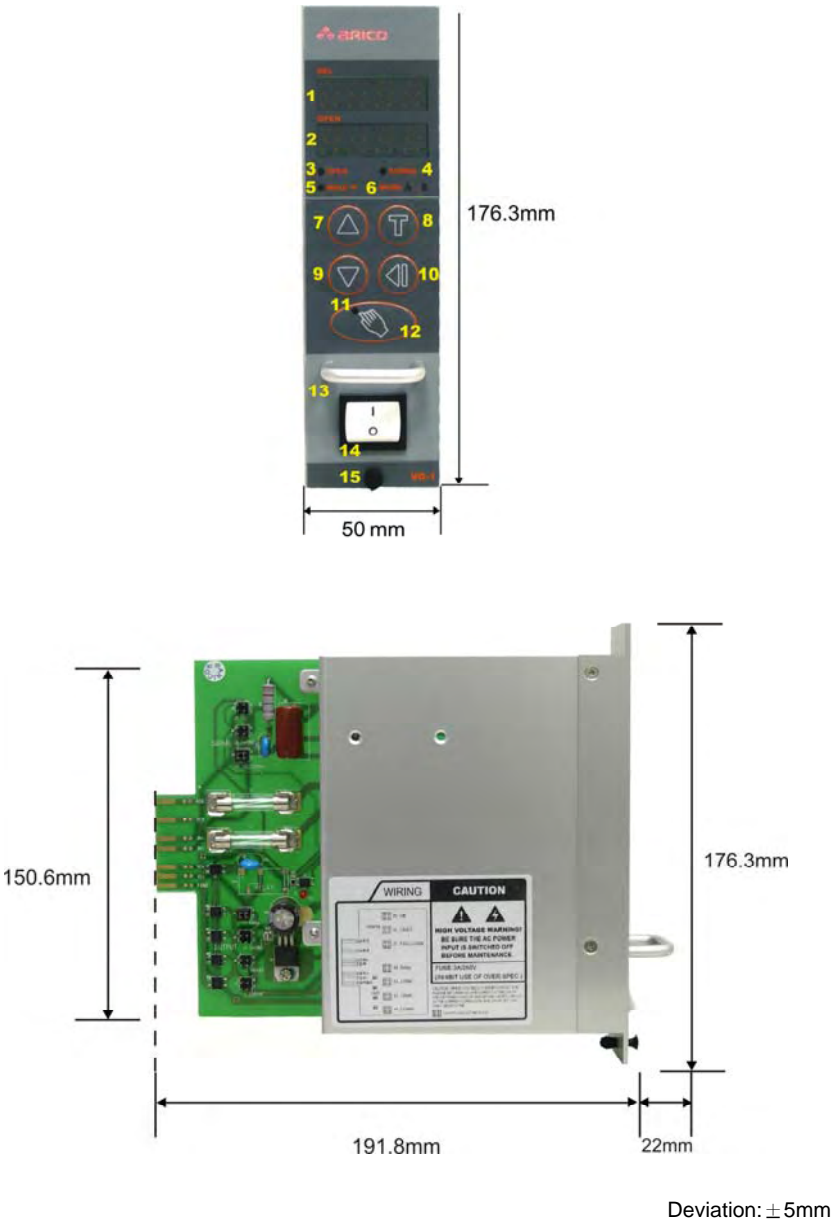
# 1-4-2 Interior structural diagram



- 1. Jumper signal input selection short-circuit method 
- 2. Fuse
- 3. Work Relay
- 4. Output selection Jumper short-circuit method same as first point
- 5. AC220V input
- 6. AC220V/110V/DC24V/Relay output
- 7. Signal input and grounding wire end

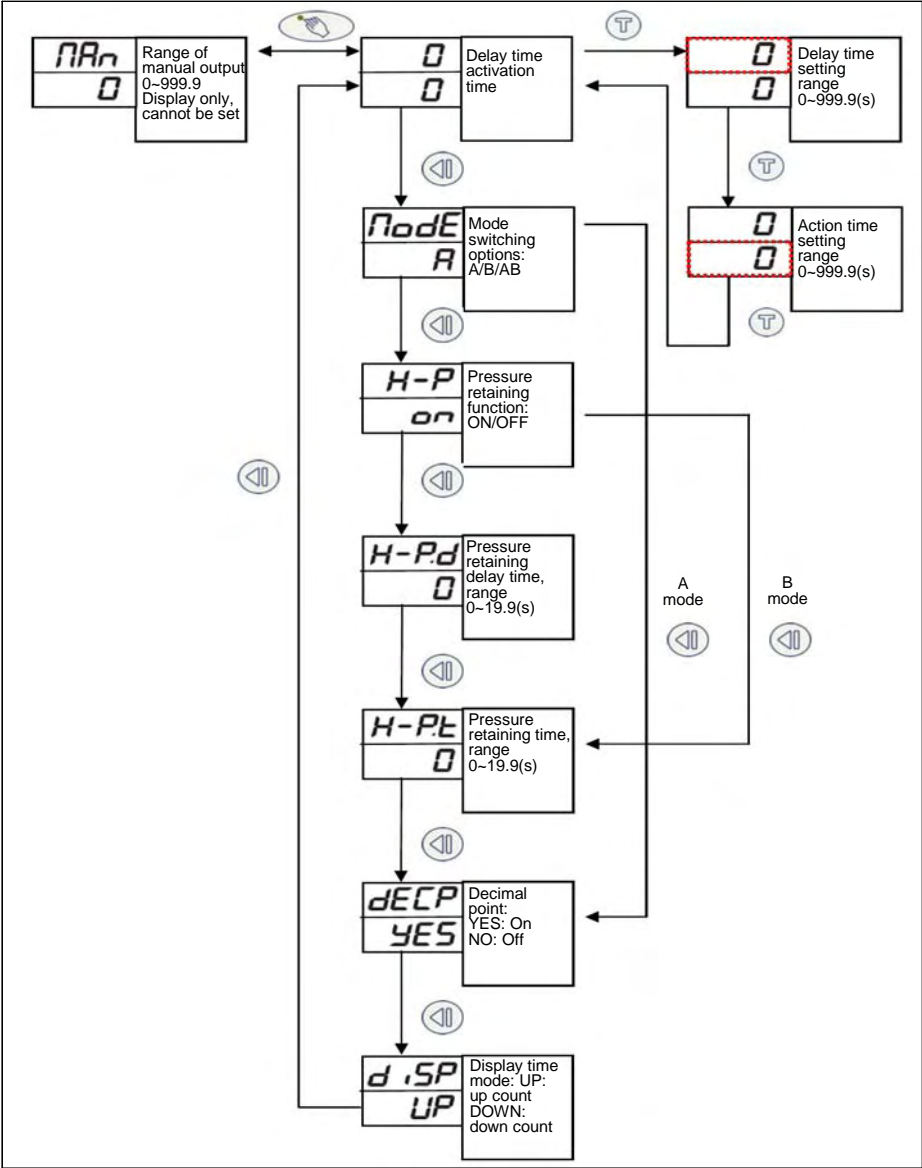
**Caution:** when you select short-circuit PIN, please be careful in regards to the short-circuit direction, up-and-down short-circuit is the correct direction, and each set can only select one.

1-4-3 Faceplate appearance and dimension



# 1-5 Operating description

## 1-5-1 Parameter flow chart



# 1-5-2 Description of Operating Modes

## A mode

Upon receipt of ejection signal, run-in point shows a closed status in delay time T1. When delay time ends, run-in point will show an ON status until the ejection signal ends and all run-in points turn off simultaneously.

Example:

Ejection time 20 seconds, First section delay time 3 seconds,  
Second section delay time 5 seconds, Third section delay time 10 seconds,  
Fourth section delay time 1 second,

Description of operation:

When the ejection signal is received, run-in point is in OFF status before reaching the delay time.

First section run-in point starts after 3 seconds,

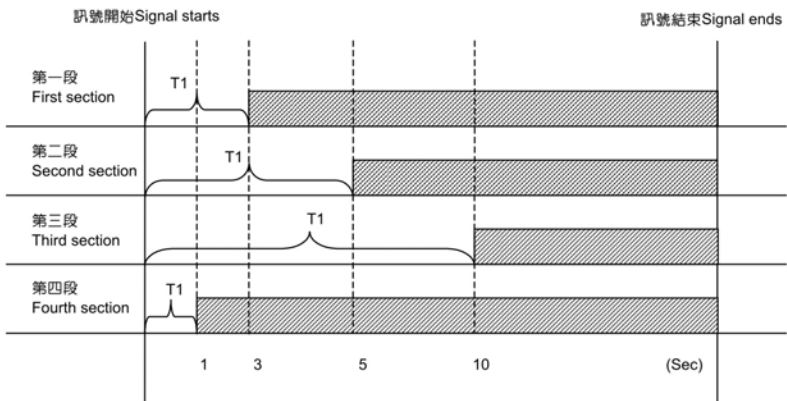
Second section run-in point starts after 5 seconds,

Third section run-in point starts after 10 seconds,

Fourth section run-in point starts after 1 second,

Run-in point shows an ON status, after ejection time ends, at the same time 1-4 sections are switched to OFF status, and wait for the signal of the next ejection.

圖例Fig. :





## B mode

Upon receipt of ejection signal, run-in point shows an OFF status in delay time T1. When delay time T1 ends, run-in point shows an ON status in start time T2. When start time T2 ends, run-in point turns off.

When the pressure retaining function is activated, after start time T2 ends, turn off run-in point and wait until ejection signal ends, then start pressure retaining function and stop receiving signals.

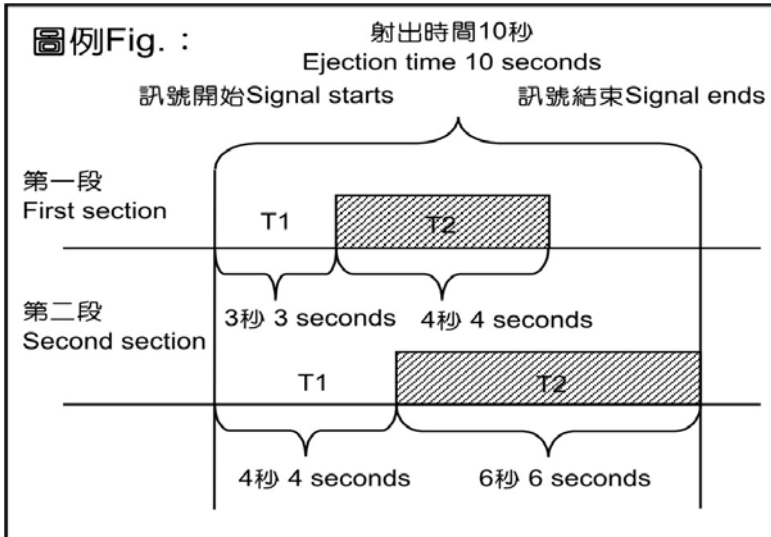
Run-in point is in ON status during pressure retaining time. When pressure retaining time ends, run-in point turns off and starts to wait for the signal of the next ejection. All sections can set different delay and start times.

Example 1:

Set ejection signal 10 seconds

First section delay time 3 seconds, start time 4 seconds; second section delay time 4 seconds, start time 6 seconds

Operation: Upon receipt of the ejection signal, first section run-in point starts in 3 seconds; second starts after 4 seconds, first section run-in point turns 4 seconds after starting, second section run-in point turns off 6 seconds after starting.



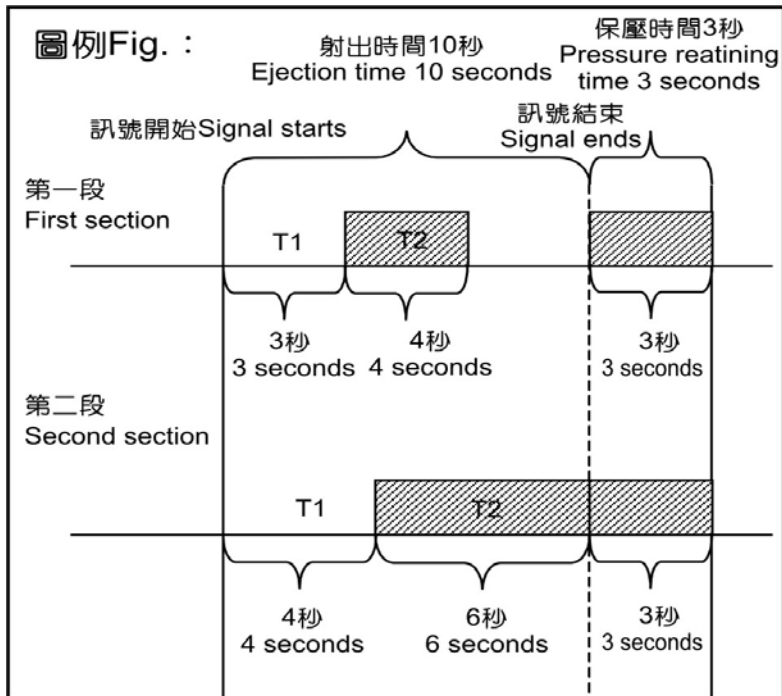
Example 2 (with pressure retaining function)

Set ejection signal 10 seconds

First section delay time 3 seconds, start time 4 seconds, pressure retaining start time 3 seconds

Second section delay time 4 seconds, start time 6 seconds, pressure retaining start time 3 seconds

Operation: After ejection signal is received, first section run-in point starts in 3 seconds; second sections starts in 4 seconds, first section run-in point turns off 4 seconds after starting, second section run-in point turns off 6 seconds after starting, after all section run-in points turn off, wait for the end of ejection signal, enter pressure retaining operation to start run-in point turn off 3 seconds, and begin to receive signals of the next ejection.



AB mode(applicable to trigger signal models with exterior mechanical switches)

Upon receipt of the ejection signal, run-in point shows OFF status in delay time T1. When delay time T1 ends, run-in point shows ON status in start time T2. When start time T2 ends, run-in point turns off.

When pressure retaining time setting is activated, after start time T2 ends, run-in point shows OFF status in pressure retaining time, when pressure retaining delay time ends, run-in point shows ON status in pressure retaining time; when pressure retaining time ends, run-in point turns off.

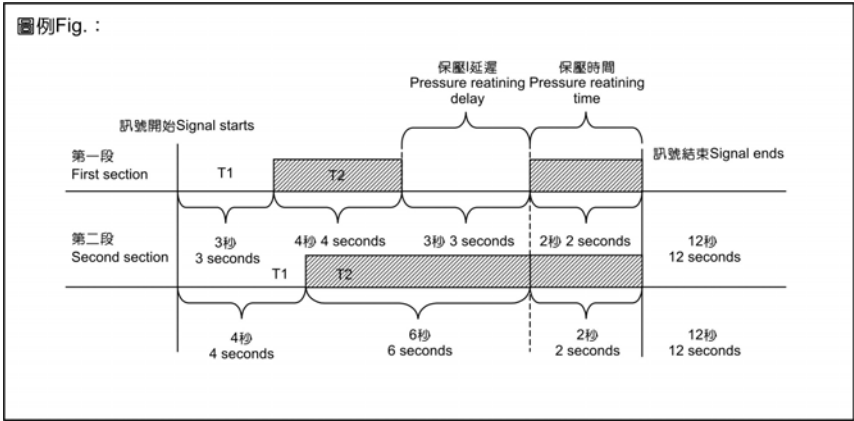
Example:

Set ejection signal 12 seconds

First section delay time 3 seconds, start time 4 seconds, pressure retaining delay time 3 seconds, pressure retaining time 2 seconds; second section delay time 4 seconds, start time 6 seconds, pressure retaining delay time 0 seconds, pressure retaining operation time 2 seconds

Operation:

Upon receipt of ejection signal, first section run-in point starts after 3 seconds, and closes after 4 seconds after run-in point starts, and enters pressure retaining mode after run-in point is closed, run-in point starts after delay 3 seconds, and closes after 2 seconds after run-in point starts. Second section run-in point starts 4 seconds after receipt of signal, run-in point closes 6 seconds after starting and enters pressure retaining mode, run-in point starts 0 seconds after it is closed, run-in point closes 2 seconds after the start.



# Chapter 2     Option

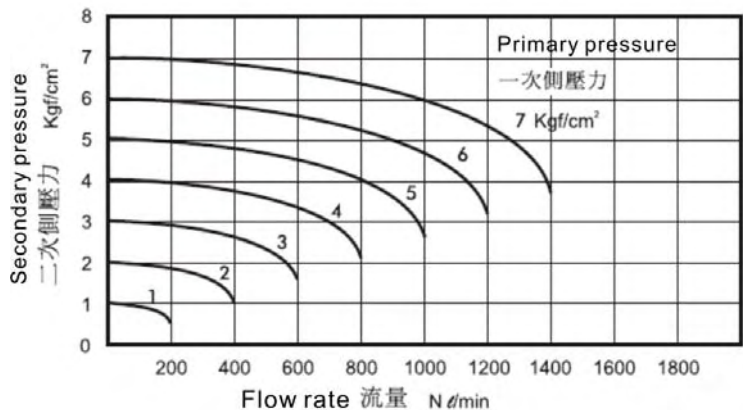
## 2-1   Solenoid Valve MVSE-260

### Series specification



Model	MVSE-260-4E1
Bore NO.	8A
Port size	PT 1/4
No. of port	5□
No. of position	2
Medium	Air
Operating pressure range	2~12 kgf/cm <sup>2</sup>
Proof pressure	15 kgf/cm <sup>2</sup>
Effective orifice	18 mm <sup>2</sup>
Ambient temperature	-5~+50°C (No freezing)
Response time	40 ms
voltage	AC110V, 220V (50/60)Hz, DC24V
Power consumption	AC=6/4, 9VA, DC=2.5W
Available voltage range	± 10%
Insulation class	F class
Weight	255g

### Flow features



# Order example

閥訂購代號Order example of valve :

MVSE-260-4E1-XXXXX

電壓種類Voltage

AC220 : AC220V(50/60)Hz  
AC110 : AC110V(50/60)Hz  
DC024 : DC24V

連座訂購代號Order example of manifold :

MVSE-260-5B X

型號  
Model

連座Manifold

5B : 5方口直配管型用  
5B : for body ported type

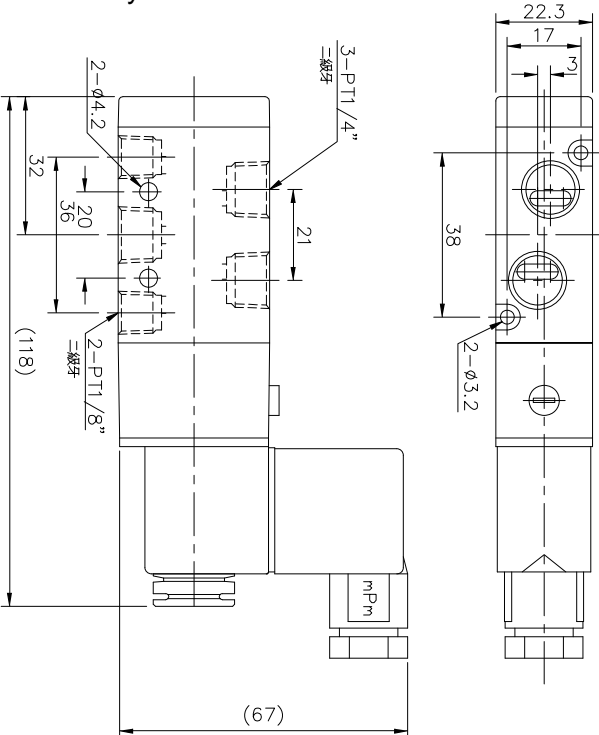
連座數Manifold number

2/4/6/8

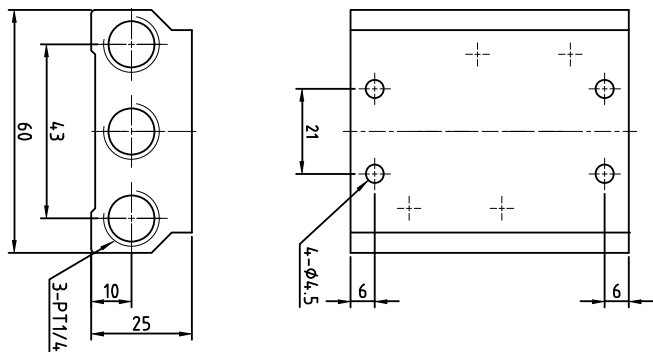
IN/OUT附8φ直接頭

## Solenoid Valve Dimension

MVSA-220-5B Valve Body



MVSA-220-5B Base



Base Suppressor and 8φ Straight Connector

Manifold number	P	L
2	57	69
4	103	115
6	149	161
8	195	207

Please use a soft air hose with a diameter of 8 φ .

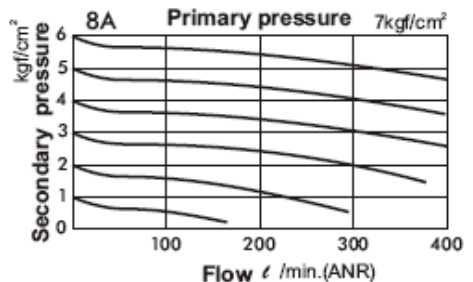
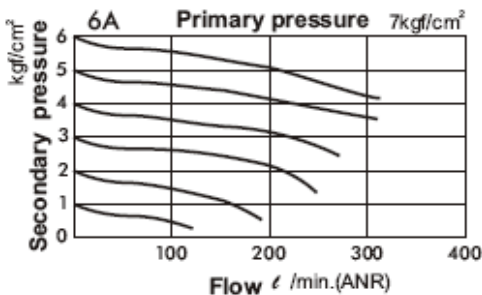
## 2-2 MACP200 Specification

### Specification



Model	MACP200
Components	MAFR200, MAL200
Bore No.	8A
Port size	PT 1/4
Medium	Air
Operating pressure range	0~9.9kgf/cm <sup>2</sup> (0~0.99MPa)
Proof pressure	15kgf/cm <sup>2</sup> (1.5MPa)
Regulation pressure range	0.5~8.5kgf/cm <sup>2</sup> (0.05~0.85MPa)
Ambient temperature	-5~+60℃ (No freezing)
Filtration	Standard : 40μm Option : 5μm
Lubricating oil capacity	25c.c
Min. flow for oil drip	50ℓ/min
Recommended lubricating oil	Turbine oil ISO-VG32
Attachment	Pressure gauge, bracket
Weight	606g

### Flow feature



## MACP200-B

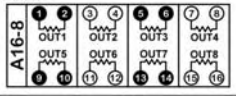
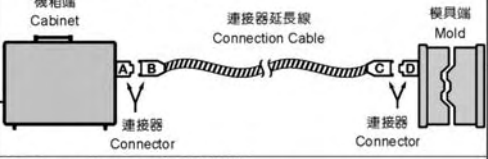






## 2-3 TC5V Controller Order List

Customer Name 客戶名稱 : \_\_\_\_\_

模 組 / MODULE	
● Membrane 薄膜 :	<input type="checkbox"/> Standard 標準 <input type="checkbox"/> Customize 客製版
● TC5V Module 模組	<input type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8 <input type="checkbox"/> _____ pieces 片(槽)
	<input type="checkbox"/> Blank plate 空白面板    _____ pieces 片(槽)

機 箱 / CABINET																										
● Cabinet 機箱 : <input type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8																										
● Power cord wiring 電源接線 : 單相 3 線(103W) , 220Vac+地線(G) , 3m Length 長度																										
● Connection 模貝連接																										
● Connection cable 連接器延長線 : 16 PIN Length 長度 : <input type="checkbox"/> Standard 標準(3m) <input type="checkbox"/> Customized 客製 _____ m 長度	● Connector assignment 連接器配線 :																									
● Quantity 數量 : _____																										
● Connector Type 固定型式																										
	<table border="1"> <thead> <tr> <th></th> <th>Cabinet 機箱端</th> <th colspan="2">Connection cable 連接器延長線</th> <th>Mold 模貝端</th> </tr> <tr> <th>Connector 連接器</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>Name 名稱</td> <td>Housing 護座</td> <td>Hood 護蓋</td> <td>Hood 護蓋</td> <td>Housing 護座</td> </tr> <tr> <td>Type 型式</td> <td>Socket 母</td> <td>Plug 公</td> <td>Socket 母</td> <td>Plug 公</td> </tr> <tr> <td>Combination 固定型式</td> <td>a</td> <td>b</td> <td>b</td> <td>a</td> </tr> </tbody> </table>		Cabinet 機箱端	Connection cable 連接器延長線		Mold 模貝端	Connector 連接器	A	B	C	D	Name 名稱	Housing 護座	Hood 護蓋	Hood 護蓋	Housing 護座	Type 型式	Socket 母	Plug 公	Socket 母	Plug 公	Combination 固定型式	a	b	b	a
	Cabinet 機箱端	Connection cable 連接器延長線		Mold 模貝端																						
Connector 連接器	A	B	C	D																						
Name 名稱	Housing 護座	Hood 護蓋	Hood 護蓋	Housing 護座																						
Type 型式	Socket 母	Plug 公	Socket 母	Plug 公																						
Combination 固定型式	a	b	b	a																						
● Connector Type 固定型式																										
 <input type="checkbox"/> a--Single Lever 單勾 Qt'y _____ 個	 <input type="checkbox"/> b--Two Pegs 單釘 Qt'y _____ 個																									

配 件 / ACCESSORIES		
Air Unit 三點組合	Solenoid valve 電磁閥	Signal cable 輸入訊號線 : 5m
		
<input type="checkbox"/> _____ sets 組	<input type="checkbox"/> _____ sets 組	<input type="checkbox"/> _____ pieces 條

● Note 備註 :

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